

Attorney Docket No. RESP:111US
U.S. Patent Application No. 10/611,329
Reply to Office Action of December 13, 2006
Date: April 13, 2007

Remarks

At the onset, Applicants respectfully submit that the Office Action Summary indicates that Claims 1-22 are allowed, while the Detailed Action indicates that Claims 1-22 are rejected. Applicants courteously request clarification in the next Office Communication.

The Rejection of Claims 1-22 under 35 U.S.C. § 101

Claims 1-22 were rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. More specifically, the Examiner asserted that independent Claims 1, 5, 18, 19, 21 and 22 recite the mere manipulation of data or an abstract idea, or merely solve a mathematical problem without a limitation to a practical application. Additionally, the Examiner has rejected Claims 2-4, 6-17 and 20 as they depend from independent Claims 1, 5 and 19, respectively. Applicants respectfully traverse this rejection and request reconsideration for the following reasons.

Applicants have amended Claims 1, 5, 18, 19, 21 and 22 to recite limitations to a practical application. Specifically, each of Claims 1, 5, 18, 19, 21 and 22 have been amended to include the limitation of determining whether the first and second biometric samples are from a same or common source. In other words, a useful, concrete and tangible result is recited, *i.e.*, a determination of whether first and second biometric samples are associated with the same source, or in the alternative, are associated with different sources.

Applicants courteously submit that one of ordinary skill in the art recognizes that a determination of whether two biometric samples are associated with a same source is a useful, concrete and tangible result. For example, as described in paragraph [0003] of the instant application, “[a]nalysis of handwritten documents to identify the writer is of extreme importance in the criminal justice system.” (See Paragraph [0003]). Although handwriting has long been considered individualistic, courts have struggled with the admissibility of such documents and/or evidence, *e.g.*, wills and ransom notes, as the perceived individuality has not been established by rigorous scientific analysis. Thus, Applicants courteously submit that a method and apparatus

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for determining whether biometric samples, *e.g.*, handwriting samples, are from a same source, such as that disclosed in the instant application, are quite useful, and that the claims as amended, produce concrete and tangible results, *i.e.*, a determination of whether two biometric samples are from a same source.

In view of the foregoing, amended Claims 1, 5, 18, 19, 21 and 22 each recite inventions directed to statutory subject matter, *i.e.*, subject matter which satisfies the requirements of 35 U.S.C. § 101. Claims 2-4, 6-17 and 20 contain all the limitations of independent Claims 1, 5 and 19, respectively, due to their dependency therefrom. As independent Claims 1, 5 and 19 each recite inventions directed to statutory subject matter, it generally follows that Claims 2-4, 6-17 and 20 also each recite inventions directed to statutory subject matter, due to their dependency therefrom. Thus, Claims 2-4, 6-17 and 20 also satisfy the requirements of 35 U.S.C. § 101.

Therefore, reconsideration and removal of this rejection is appropriate and respectfully requested.

The Rejection of Claim 21 under 35 U.S.C. § 101

Claims 21 was rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. More specifically, the Examiner asserted that Claim 21 is drawn to functional descriptive material recorded on a propagation medium. Applicants respectfully traverse this rejection and request reconsideration for the following reasons.

Applicants courteously submit that amended Claim 21 is directed to statutory subject matter, *i.e.*, subject matter which satisfies the requirements of 35 U.S.C. § 101. Specifically, Claim 21 has been amended to recite: "A computer based system for determining whether biometric samples are from a same source, said system comprising: means for receiving a propagated computer data signal transmitted via a propagation medium; and, a processor, wherein the propagated computer data signal comprises a plurality of instructions for biometric analysis, wherein the processor is arranged to execute the plurality of instructions to compare a first vector from a first biometric sample with a second vector from a second biometric sample and to determine whether said first and second samples are from said same source, wherein said

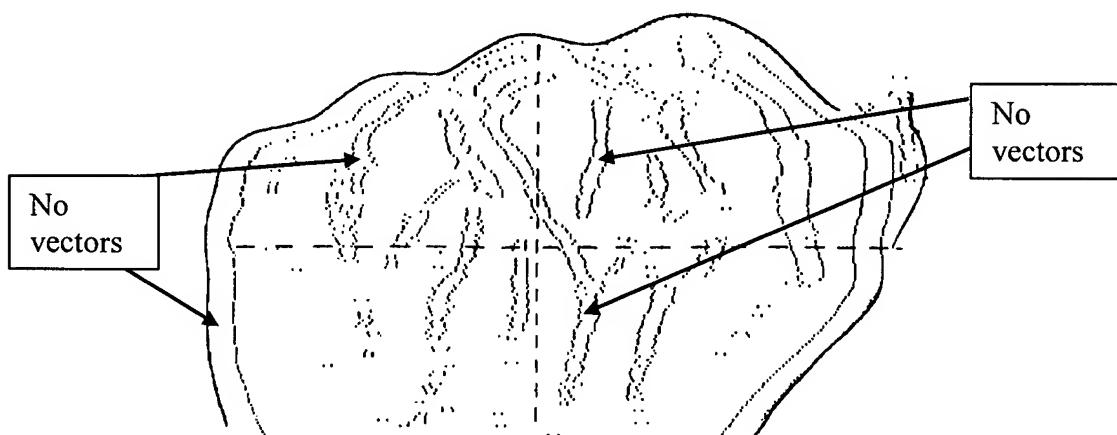
first and second vectors have at least one biometric feature and said means for receiving and said processor are disposed in at least one specially programmed general purpose computer.” Applicants courteously submit that the computer based system recited in Claim 21 is statutory subject matter as defined in 35 U.S.C. § 101, *i.e.*, a product or tangible thing.

In view of the foregoing, Applicants amended Claim 21 recites limitations which satisfy the requirements of 35 U.S.C. § 101, and therefore, reconsideration and removal of this rejection is appropriate and respectfully requested.

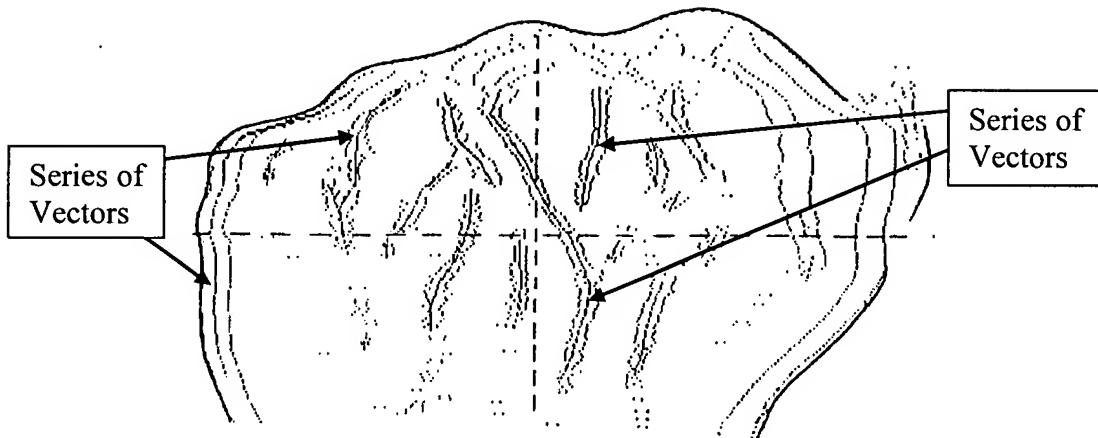
The Rejection of Claims 1, 3 and 18-21 under 35 U.S.C. § 102

Claims 1, 3 and 18-21 were rejected under 35 U.S.C. § 102 as being anticipated by United States Patent No. 5,787,185 (*Clayden*). Applicants respectfully traverse this rejection and request reconsideration for the following reasons.

Applicants courteously submit that *Clayden*’s vectors are not the same as the vectors of the instant application. Specifically, *Clayden* teaches that vectors are “straight lines approximating the center line of each blood vessel.” (*Clayden*, Col. 3, lines 3-4). Figures 5 and 6 show an image of a subject hand before and after a pattern of vectors are imposed on the image of the subject hand. (*See Figures 5 and 6 below*).



Clayden Fig. 5



Clayden Fig. 6

As can be seen in the Figures above, *Clayden's* series of vectors are “a series of small straight lines approximating to the center line of each blood vessel.” (*Clayden*, Col. 3, lines 3-4). Thus, the series of vectors, or in other words series of small straight lines, appear to approximately track the center line of each blood vessel.

Contrarily, in the instant application the term vector is used as one of ordinary skill in the art of computers and computer programming would use the term. In the instant application, vector is used to refer to “an array of data ordered such that individual items can be located with a single index or subscript”. (“Vector.” Dictionary.com. *Dictionary.com Unabridged* (v 1.1). Random House, Inc. <http://dictionary.reference.com/browse/vector> (accessed: March 11, 2007)). As set forth in paragraphs [0063] and [0064] of the instant application, “[f]eatures are quantitative measurements that can be obtained from a handwriting sample in order to obtain a meaningful characterization of the writing style.” (See Paragraph [0063]). “These measurements can be obtained from the entire document or from each paragraph, word or even a single character. In pattern classification terminology, measurements, or attributes, are called features. In order to quantify the process of matching documents, each sample is mapped onto a set of features that correspond to it, called a feature vector. For example, if measurements, f_1, f_2, \dots, f_d , are obtained from a sample, then these measurements form a column vector

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$[f_1, f_2, \dots, f_d]$, which is a data point in d -dimensional space (12); note that the superscript t indicates vector transposition.” (See Paragraph [0064]).

“A claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described in a single prior art reference.” *Vandergaal Bros. v. Union Oil of California*, 814 F.2d 628, 631; 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. § 2131 (Emphasis added). Applicants respectfully submit that *Clayden* fails to anticipate independent Claims 1, 18, 19 and 21 as it fails to disclose every element of each of the claims. Claims 1, 18, 19 and 21 each recite comparing first and second vectors, wherein “vectors” is used to describe an array of data. In contrast, Applicants respectfully submit that *Clayden* does not teach a vector as an array of data, but a vector as a straight line. Thus, since *Clayden* does not teach a vector, *i.e.*, an array of data, Claims 1, 18, 19 and 21 are not anticipated by *Clayden*. Applicants respectfully request reconsideration and allowance of Claims 1, 18, 19 and 21 as amended.

Claim 3 depends from Claim 1 and thus incorporates all the limitations of that claim. Because, as discussed above, *Clayden* fails to anticipate all the elements of Claim 1, it also fails to anticipate Claim 3, due to its dependency from Claim 1. Thus, Applicants respectfully request the removal of the rejection of Claim 3 and allowance of the same.

Similarly, Claim 20 depends from Claim 19 and thus incorporates all the limitations of that claim. Because, as discussed above, *Clayden* fails to anticipate all the elements of Claim 19, it also fails to anticipate Claim 20, due to its dependency from Claim 19. Thus, Applicants respectfully request the removal of the rejection of Claim 20 and allowance of the same.

The Rejection of Claims 5-7 under 35 U.S.C. § 102

Claims 5-7 were rejected under 35 U.S.C. § 102 as being anticipated by United States Patent No. 6,052,481 (*Grajski*). Applicants respectfully traverse this rejection and request reconsideration for the following reasons.

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Applicants respectfully submit that *Grajski et al.* fail to anticipate independent Claim 5 as they fail to disclose every element of the claim. Claim 5 recites a computer based method for determining whether biometric samples are from a same source. More specifically, Claim 5 includes the step of “determining whether said first and second biometric samples are from said same source with a general purpose computer.”

In contrast, *Grajski et al.* do not teach a method of determining whether two biometric samples are from a same source. Applicants respectfully submit that *Grajski et al.* disclose “a method for processing stroke-based handwriting data for the purposes of automatically scoring and clustering the handwritten data to form letter prototypes”. (*Grajski et al.*, Col. 6, lines 59-62). As disclosed, scoring is used to establish clusters of similar occurrences of a particular character, *e.g.*, the letter “B”, and subsequently the clusters are used to identify an unknown handwriting prototype. (*Grajski et al.*, Col. 7, lines 41-48). In other words, the method taught by *Grajski et al.* does not include the step of determining whether two biometric samples are from a same source, but rather the step of determining what character has been written, *e.g.*, whether a person wrote the letter “B” versus the number “8”.

Therefore, Applicants courteously submit that since *Grajski et al.* do not teach the step of determining whether two biometric samples are from a same source, Claim 5 is not anticipated by *Grajski et al.*. Applicants respectfully request reconsideration and allowance of Claim 5 as amended.

Claims 6 and 7 depend from Claim 5 and thus incorporate all the limitations of that claim. Because, as discussed above, *Grajski et al.* fail to anticipate all the elements of Claim 5, it also fails to anticipate Claims 6 and 7, due to their dependency from Claim 5. Thus, Applicants respectfully request the removal of the rejections of Claims 6 and 7 and allowance of the same.

Allowable Subject Matter

Applicants courteously submit that for the reasons set forth above, Claims 2, 4 and 8-17 satisfy the requirements of 35 U.S.C. § 101. Additionally, Claim 2 has been amended to include all the limitations of the claim from which it depends, *i.e.*, Claim 1; Claim 4 has been amended to

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include all the limitations of the claim from which it depends, *i.e.*, Claim 1; Claim 8 has been amended to include all the limitations of the claim from which it depends, *i.e.*, Claim 5; and, Claim 10 has been amended to include all the limitations of the claims from which it depends, *i.e.*, Claims 5 and 7. As Claims 2, 4, 8 and 10 have not been rejected in view of either of the cited references, Applicants respectfully assert that it generally follows that, as amended, Claims 2, 4, 8 and 10 are in condition for allowance, which action is courteously requested.

Claim 9 depends from Claim 8 and thus incorporates all the limitations of that claim. Because, as discussed above, Claim 8 is in condition for allowance, it generally follows that Claim 9 is also in condition for allowance, due to its dependency from Claim 8. Similarly, Claims 11-17 depend either directly or indirectly from Claim 10 and thus incorporate all the limitations of that claim. As discussed above, Claim 10 is in condition for allowance, and thus it generally follows that Claims 11-17 are also in condition for allowance, due to their dependency from Claim 10.

Thus, Applicants respectfully submit that Claims 2, 4 and 8-17 are in condition for allowance, which action is courteously requested.

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Conclusion

Applicants respectfully submit that the present application is in condition for allowance, which action is courteously requested. The Examiner is invited and encouraged to contact the undersigned attorney of record if such contact will facilitate an efficient examination and allowance of the application.

Respectfully submitted,



Robert C. Atkinson, Esq.
Registration No. 57,584
Simpson & Simpson PLLC
Customer No. 24041
5555 Main Street
Williamsville, NY 14221
Phone: (716) 626-1564
Fax: (716) 626-0366

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